

in this Journal. A great part of them will, we are confident, maintain their ground with, it may be, a few modifications. Others unavoidably excite our scepticism; but, until arguments are adduced on the other side, founded on something like equally cautious and intelligent study, Mr. Babington has a fair right to claim a strong provisional authority. If any one starts, as assuredly he ought to do, at being told that *Arctium majus* and *minus* constitute five species, we can only counsel patience and renewed observation. A large proportion of the novelties occur in the genus *Hieracium*, where the pains bestowed by Mr. Backhouse on the cultivation of doubtful forms supply an excellent check on hasty conclusions in either direction. We should not omit to notice the arrangement of the Grasses, which has been greatly improved, chiefly from Fries and Andersson.

Species introduced or separated in the 4th edition.

Ranunculus trichophyllus, <i>Chaix.</i>	Hieracium senescens, <i>Backh.</i>
R. Drouetii, <i>F. Schultz?</i>	H. lasiophyllum, <i>Koch.</i>
R. Baudotii, <i>Godr.</i>	H. Gibsoni, <i>Backh.</i>
R. floribundus, <i>Bab.</i>	H. argenteum, <i>Fr.</i>
R. peltatus, <i>Fr.</i>	H. nitidum, <i>Backh.</i>
Polygala austriaca, <i>Cr.</i>	H. aggregatum, <i>Backh.</i>
[<i>Sagina densa, Jord.</i>]	H. stelligerum, <i>Froel.</i>
Hypericum anglicum, <i>Bert.</i>	Thymus Serpyllum, <i>L.</i>
Rubus pampinosus, <i>Lees.</i>	† <i>Salix acutifolia, Willd.</i>
Epilobium rosmarinifolium, <i>Haenke.</i>	Orechis inearnata, <i>L.</i>
E. anagallidifolium, <i>Lam.</i>	Epipogium aphyllum, <i>Sw.</i>
Galium montanum, <i>Vill.</i>	Arum italicum, <i>Mill.</i>
G. commutatum, <i>Jord.</i>	[<i>Potamogeton sparganiiifolius,</i> <i>Laest.?</i>]
G. elongatum, <i>Presl.</i>	[<i>Eleocharis Watsoni, Bab.</i>]
Arctium tomentosum, <i>Pers.</i>	Festuca Myurus, <i>L.</i>
A. intermedium, <i>Lange.</i>	Equisetum Moorii, <i>Newm.</i>
A. pubens, <i>Bab.</i>	Pseudathyrium alpestre, <i>Newm.</i>
Hieracium holosericeum, <i>Backh.</i>	? <i>P. flexile, Newm.</i>
H. eximium, <i>Backh.</i>	? <i>Asplenium acutum, Bory.</i>
H. calenduliflorum, <i>Backh.</i>	[<i>Gymnogramma leptophylla, Desv.</i>]
H. gracilentum, <i>Backh.</i>	? [<i>Botrychium rutaceum, Sw.</i>]
H. globosum, <i>Backh.</i>	? [<i>Ophioglossum lusitanicum, L.</i>]

Species omitted in the 4th edition.

Thalictrum majus.	Hieracium anglicum.
Rubus calvatus.	[<i>H. oreades.</i>]
R. fuscus.	H. dovreense.
R. Wahlbergii.	Salix Helix.
Hieracium atratum.	S. Forbyana.

Trees and their Nature, or the Bud and its Attributes. By ALEX. HARVEY, A.M., M.D. &c. London, 1856.

This is an amusing little volume, displaying a great deal of acuteness, and the results of very careful reading within a limited sphere. The object of the work is the discussion of the vexed question of

individuality in plants, and the advocacy of the claim of the *bud* to the dignity of the 'vegetable individual.' So far as inquiries of this sort tend to direct attention to the physiological laws ruling the growth and multiplication of plants, they are beneficial; but as regards the main question it appears to us only a metaphysical puzzle, calculated to afford much amusement to those whose taste lies that way, but having no practical bearing. The meaning of the word 'individual' must always depend on foregone conclusions. It seems to us that the author is not clear in distinguishing *potentiality* from *actuality*. When a botanist speaks of the annual layers of wood of the stems of Dicotyledons as 'roots,' the term can only be admitted in a figurative sense. A bud may be *capable* of producing a distinct tree, but if it be not detached, it becomes an *individual branch*, not an *individual tree*. Our author does not appear to be aware, either, that roots as well as stems originate in definitely organized 'buds,' formed in the cambium region. The work is agreeably written, and its perusal may serve as a pleasant intellectual exercise, but it must not be accepted by any means as a full exposition of the question.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

July 10, 1855.—John Gould, Esq., F.R.S., in the Chair.

ON THE GEOGRAPHICAL DISTRIBUTION OF THE MAMMALIA AND BIRDS OF THE HIMALAYA.

BY B. H. HODGSON, ESQ.*

"The Himalayan mountains extend from the great bend of the Indus to the great bend of the Brahmapútra, or from Gilgit to Brahma Kúnd, between which their length is 1800 miles. Their mean breadth is about 90 miles; the maximum about 110, and the minimum 70 miles. The mean breadth of 90 miles may be most conveniently divided into three equal portions, each of which will therefore have 30 miles of extent. These transverse climatic divisions must be, of course, more or less arbitrary, and a microscopic vision would be disposed to increase them considerably beyond three, with reference to geological, to botanical, or to zoological phenomena. But, upon comparing Captain Herbert's distribution of geological phenomena with my own of zoological, and Dr. Hooker's of botanical, I am satisfied that three are enough. These regions I have denominated the lower, the middle, and the upper. They extend from the external margin of the Tarai to the ghát line of the snows. The lower region may be conveniently divided into—I. The sandstone range, with its contained Dhúns or Maris; II. The Bháver or Saul forest; III. The Tarai. The other two regions require no

* Extracted from a memoir by the same author, entitled, "On the Physical Geography of the Himalaya," and printed in the Journal As. Soc. Bengal for 1849, by Frederic Moore.